

WHAT IS CLAIMED IS:

- 1 1. An optocoupler package comprising:
 - 2 (a) a substrate comprising a leadframe and a molding compound;
 - 3 (b) an optical emitter;
 - 4 (c) an optical receiver, wherein the optical emitter and the optical receiver
5 are electrically coupled to the leadframe; and
 - 6 (d) an optically transmissive medium disposed between the optical emitter
7 and optical receiver.
- 1 2. The optocoupler package of claim 1 further comprising a plurality of
2 conductive structures coupled to the leadframe, wherein the conductive structures have
3 heights greater than the heights of the optical receiver and the optical emitter.
- 1 3. The optocoupler package of claim 2 wherein the conductive structures
2 are solder structures.
- 1 4. The optocoupler package of claim 1 further comprising bond wires
2 electrically coupling the optical receiver to the leadframe and electrically coupling the optical
3 emitter to the leadframe.
- 1 5. The optocoupler package of claim 1 wherein the leadframe includes a
2 etched portions and non-etched portions, and wherein the etched portions are covered by the
3 molding compound and the non-etched portions are not covered by the molding compound.
- 1 6. The optocoupler package of claim 1 wherein the leadframe comprises
2 copper.
- 1 7. The optocoupler package of claim 1 wherein a plurality of
2 optocouplers are on the substrate.
- 1 8. The optocoupler package of claim wherein the leadframe includes a
2 etched portions and non-etched portions at a first side, and wherein the etched portions are
3 covered by the molding compound and the non-etched portions are not covered by the
4 molding compound, and wherein the molding compound completely covers the second side
5 of the leadframe.

1 9. A method for forming an optocoupler package comprising:
2 (a) forming a substrate comprising a leadframe and a molding compound;
3 (b) attaching an optical emitter and an optical receiver to the substrate; and
4 (c) depositing a light transmissive material between the optical emitter and
5 the optical receiver.

1 10. The method of claim 9 further comprising:
2 forming a plurality of conductive structures on the substrate, wherein the
3 conductive structures have heights greater than the heights of the optical emitter and optical
4 receiver.

1 11. The method of claim 9 wherein the method comprises, prior to (a),
2 etching the leadframe.

1 12. The method of claim 9 wherein the leadframe comprises copper.

1 13. The method of claim 9 further comprising attaching wires from the
2 optical emitter and the optical receiver to the leadframe.

1 14. The method of claim 9 further comprising depositing an opaque
2 material on the light transmissive material.

1 15. The method of claim 9 further comprising attaching at least four
2 optical emitters and at least four optical receivers on the substrate.

1 16. An optocoupler package comprising:
2 (a) a substrate; and
3 (b) at least two optical emitters;
4 (c) at least two optical receivers;
5 (d) optically transmissive media between adjacent optical emitters and
6 optical receivers; and
7 (e) a light reflective material on the optically transmissive media,
8 wherein the optical emitters and the optical receivers are on the substrate.

1 17. The optocoupler package of claim 16 wherein the substrate includes a
2 leadframe including etched portions.

1 18. The optocoupler package of claim 16 wherein the substrate comprises
2 a leadframe that includes copper and a molding compound.

1 19. The optocoupler package of claim 16 further comprising a chip
2 including a MOSFET on the substrate.

1 20. The optocoupler package of claim 1 further comprising a chip
2 including a MOSFET on the substrate.